

35. A driving system driving a liquid crystal display device having a plurality of scanning lines, a plurality of data lines, a plurality of data signal sources and a plurality of scanning signal sources comprising:

a plurality of data drivers;

a plurality of gate drivers; and

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could
a plurality of width expanders for controlling widths of a scanning signal provided to the scanning lines in accordance with a position from the scanning lines to the data signal sources;

wherein a data signal voltages have varying widths depending on the distance of the data lines from the scanning signal sources.--

REMARKS

Applicant respectfully thanks the Examiner for the courtesies extended during the personal interview on October 23, 2001. At that time, the Examiner indicated that claims 27-30 are allowable over all of the cited references as originally filed. The Examiner requested Applicant to clarify the claim language on some of the claims without changing the scope of the claims. Applicant agreed to clarify the claim language.

Accordingly, by this Amendment, Applicant has amended claims 3-6, 13, 16, 17, 19, 22, 23 and 25 to further clarify the subject matter of the invention as discussed with the Examiner and submits that the amendments to the claims do not narrow the original scope of the claims. Also, Applicant has added new claims 31-35. Accordingly, claims 3-6 and 13-35 are pending in this application. Applicant submits that no new matter has been added.

Applicant respectfully submits that claims 3-6 and 13-26, which have been amended consistent with the agreement reached with the Examiner during the interview, are in condition for allowance.

Applicant respectfully submits that new claims 31-35 also define subject matter allowable over the cited references. For example, claims 31-35 are generally directed toward a system and method of driving a liquid crystal display (LCD) wherein the signal and scanning widths are varied as recited in these claims. In contrast, Ohwada does not teach or suggest such claimed system or method. Accordingly, Applicant respectfully submits that claims 31-35 are allowable.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

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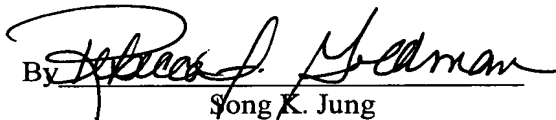
Docket No.: 8733.086.00
Page 10

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 624-1200 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

Respectfully submitted,

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Attachment: Exhibit I

ATTACHMENT-EXHIBIT I

MARKED-UP VERSION OF CLAIMS SHOWING CLAIM CHANGES

3. (Amended) A method of driving a matrix type liquid crystal panel provided with a plurality of thin film transistors coupled to scanning wires and signal wires, and a plurality of liquid crystal cells, at intersecting points of the scanning wires and the signal wires, the method comprising steps of:

applying a scanning signal voltage to the scanning wire; and

supplying data signal voltages having a width enlarged in accordance with a distance [position] from a source of [at] the scanning signal [wire] to the signal wires.

4. (Amended) A method of driving a matrix type liquid crystal panel provided with a plurality of thin film transistors coupled to scanning wires and signal wires, and a plurality of liquid crystal cells, at intersecting points of the scanning wires and the signal wires, the method comprising steps of:

applying a scanning signal voltage pulse to the scanning wire;

supplying data signal voltages to the signal wires; and

allowing the data signal voltages to be supplied to the signal wires to have a different [difference] width in accordance with a distance [position] from a source of [at] the scanning wire.

5. (Amended) A method of driving a matrix type liquid crystal panel provided with a plurality of thin film transistors coupled to scanning wires and signal wires, and a plurality of

liquid crystal cells, at intersecting points of the scanning wires and the signal wires, the method comprising steps of:

applying data signal voltages to the signal wires; and

supplying a scanning signal voltage having a width enlarged in accordance with a [position] distance from a source of the signal wire to the scanning wire.

6. (Amended) method of driving a matrix type liquid crystal panel provided with a plurality of thin film transistors coupled to scanning wires and signal wires, and a plurality of liquid crystal cells, at intersecting points of the scanning wires and the signal wires, the method comprising steps of:

applying a scanning voltage having a width enlarged in accordance with a position at the signal wire to the scanning wire; and

supplying data signal voltages having a width enlarged in accordance with a distance [position] from a source of [at] the scanning wire to the signal wires.

13. (Amended) An apparatus for driving a matrix type liquid crystal panel provided with a plurality of thin film transistors coupled to scanning wires and signal wires, and a plurality of liquid crystal cells, at intersecting points of the scanning wires and the signal wires, the apparatus comprising:

scanning side driving means for applying a scanning signal voltage to the scanning wire;

signal side driving means for supplying data signal voltages to the signal wires; and

width control means for allowing the scanning signal voltage to have a different width in accordance with a [position] distance from a source of [at] the signal wire.

16. (Amended) An apparatus for driving a matrix type liquid crystal panel provided with a plurality of thin film transistors coupled to scanning wires and signal wires, and a plurality of liquid crystal cells, at intersecting points of the scanning wires and the signal wires, the apparatus comprising:

scanning side driving means for applying a scanning voltage to the scanning wire; and
signal side driving means for supplying data signal voltages having a width enlarged in accordance with a [position] distance from a source on the scanning wire to the signal wires.

17. (Amended) The apparatus as set forth in claim 16, wherein the signal side driving means comprises:

a plurality of signal wire driving cells for dividing the signal wires by a certain area and supplying data signal voltages to the divided areas; and

control means for driving the signal wire driving cells in such a manner that the width of the data signal voltage to be transmitted from each the signal wire driving cell to each [the] of the signal wire is gradually enlarged.

19. (Amended) An apparatus for driving a matrix type liquid crystal panel provided with a plurality of thin film transistors coupled to scanning wires and signal wires, and a

plurality of liquid crystal cells, at intersecting points of the scanning wires and the signal wires, the apparatus comprising:

scanning side driving means for applying a scanning voltage to the scanning wire;
signal side driving means for supplying data signal voltages to the signal wires; and
width control means for making the data signal voltages to be supplied to the signal wires have a different width in accordance with a [position] distance from a source on the scanning wire.

22. (Amended) A driving apparatus for a matrix type liquid crystal panel provided with a plurality of thin film transistors coupled to scanning wires and signal wires, and a plurality of liquid crystal cells, at intersecting points of the scanning wires and the signal wires, the apparatus comprising:

scanning side driving means for applying a scanning signal voltage having a width enlarged in accordance with a [position] distance from a source of the signal wire to the scanning wire; and

signal side driving means for supplying a data signal voltage having a width enlarged in accordance with a [position] distance from a source of the scanning wire to the signal wire.

23. (Amended) A driving system for a liquid crystal display device having a plurality of scanning lines, a plurality of data lines generally orthogonal to the scanning lines, and a plurality of liquid crystal cells formed at the intersections of data lines and scanning lines, the driving system comprising:

a plurality of scanning driver integrated circuits connected to the scanning lines for applying scanning signals thereto;

a plurality of data driver integrated circuits connected to the data lines for applying data signals thereto; and

a width controller for carrying widths of time periods during which the data signals are applied by the data driver integrated circuits to the data lines in accordance with the data lines' respective positions with respect to [the] a scanning line[s] source.

25. (Amended) A driving system for a liquid crystal display device having a plurality of scanning lines, a plurality of data lines generally orthogonal to the scanning lines, and a plurality of liquid crystal cells formed at the intersections of data lines and scanning lines, the driving system comprising:

a plurality of scanning driver integrated circuits connected to the scanning lines for applying scanning signals thereto;

a plurality of data driver integrated circuits connected to the data lines for applying data signals thereto; and

a controller for varying widths of time periods during which the scanning signals are applied by the scanning driver integrated circuits to the scanning lines in accordance with the scanning lines' respective positions with respect to [the] a data line[s] source.